FOR RESEARCICONY NOTORTS

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# GEOGRAPHIC INTELLIGENCE REVIEW



CIA/RR-MR-39 April 1954

DOCUMENT NO. NO CHANGE IN CLASS.			:	
DECLASSIFIED CLASS, CHANGED TO:		S	C	
NEXT REVIEW DATE:	VIEW	ER	006514	

### CENTRAL INTELLIGENCE AGENCY

OFFICE OF RESEARCH AND REPORTS

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### GEOGRAPHIC INTELLIGENCE REVIEW

CIA/RR-MR-39

#### NOTE

With this issue, the name of the Map Intelligence Review is changed to Geographic Intelligence Review. The publication currently includes an increasing number of articles and notes of a geographic nature not necessarily related to map intelligence. The new title is a more appropriate reflection of the broader scope of information now included. For the convenience of users, the designation MR has been retained and the numbers will continue in the same sequence.

CENTRAL INTELLIGENCE AGENCY

Office of Research and Reports

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<sup>\*</sup>The individual classification of each article in this Review is given at the end of the article.

# TRANSPORTATION AND ECONOMIC DEVELOPMENT IN WEST CHINA

### A. The New Transportation Pattern

Recent Chinese Communist press releases emphasize the development of railroads and roads in the western provinces of China-Kansu, Tsinghai, Sikang, and Szechwan. In the past year, periodic
reports have appeared on the progress of construction on the

Lan-chou--Sinkiang and the Szechwan--Kansu railroads, as well as
numerous reports on plans for the rehabilitation or construction of
feeder roads in provinces of the Sino-Tibetan borderland. (See
accompanying map, CIA 12978.)

The long-term objectives of the construction program are (1) to connect China Proper with Sinkiang and the USSR by the Lan-chou--Sinkiang line and (2) to link two potential inland industrial areas by the Szechwan--Kansu railroad. The emphasis placed on feeder roads west of the two lines, however, directs attention to the more immediate objective of promoting trade in the native products of Kansu, Tsinghai, and Sikang. In addition to the more obvious desire of the Communists to exploit the petroleum possibilities of the Yt-men oilfield, the system of roads is designed to tap the less apparent but nevertheless important livestock and mineral resources of the western provinces. Since the

Communist exploitation of the native products of West China seems to be closely dependent upon the rate of railroad and road construction in this area, the progress and prospects of construction take on considerable importance.

### B. The Northwest Railroad (Lan-chou--Sinkiang)

Recent periodic reports in the Chinese Communist press have dealt with progress in the construction of the Lan-chou--Sinkiang railroad. These reports, together with proposed alignments shown by recent Chinese maps and atlases, permit a general delineation of the proposed alignment of the railroad and a preliminary evolution of construction progress, both past and future. In this report, only the completed Lan-chou--Yung-teng section and the proposed route from Yung-teng to Chiu-ch'üan in Kansu Province are considered.

Terrain characteristics along the proposed route of the

Lan-chou--Sinkiang railroad impose problems of (1) tunnel construction and the stabilizing of cuts and fills in the Loess Plateau

(Lan-chou to Yung-teng), where landslides, mud flows, and unstable
boggy or marshy ground are encountered; (2) curves, grades, and
bridge and tunnel construction in the Wu Chiao Ling area north of
Yung-teng and in the divide between the Wu-wei and Etsin Gol Basins;

(3) bridging and filling in the areas of intensive cultivation and

irrigation in the Wu-wei Basin and Kan-chou Ho valley; and (4) line construction in areas of shifting sand and unstable salt marsh northwest of Chang-yeh. For the most part, however, the most serious problems of construction on the line will probably be encountered in the section now under construction between Lan-chou and the Wu Chiao Ling divide. Once the pass has been crossed, construction should progress at a rate commensurate with the supply capabilities of the Communists.

### 1. Alignment and Construction Problems

According to recent reports the line has been completed and trains are operating from Lan-chou to Yung-teng. The route from Lan-chou follows the southern bank of the Huang Ho. Near Ho-k'ou, where the Chuang-lan Ho joins the Huang Ho from the north, the line crosses the Huang Ho and enters the valley of the Chuang-lan Ho. From Ho-k'ou to the Wu Chiao Ling pass, the line parallels the Northwest Highway in the Chuang-lan Ho valley. The crests of the Wu Chiao Ling project above the thick mantle of loess, and the valleys of the Huang Ho and the Chuang-lan Ho have been incised into the loess. Thus, between Ho-k'ou and Ching-szu-pao, the Chuang-lan Ho valley is a deep, steep-sided loess gorge. Nearer Yung-teng, as the Chuang-lan Ho valley

approaches the rolling surface of the Loess Plateau below the Wu Chiao Ling range, the valley widens and its flood plain levels out.

Gradients of the line between Ho-k'ou and Yung-teng are steepest in the lowest part of the valley, 5 or 6 kilometers from the Huang Ho bridge. Above Ching-szu-pao, gradients are generally easier (probably less than 1 percent) as far as a point about 12 kilometers north of Yung-teng, where the ascent of the Wu Chiao Ling begins. Two major crossings of the Chuang-lan Ho have been mentioned in news reports on construction activity along this line. The first is located about 4 kilometers north of Ho-k'ou and the second, upon which work is reportedly progressing, is probably located on the outskirts of Wu-sheng-i, 15 kilometers northwest of Yung-teng.

It is likely that construction problems on the lower part of the Chuang-lan Ho valley were similar to those encountered in the construction of the line through the Loess Plateau from T'ien-shui to Lan-chou, where landslides, mud flows, and unstable boggy or marshy ground are common.

Beyond Yung-teng, the Chuang-lan Ho valley narrows and steepens as the entrance to Wu Chiao Ling pass is approached.

Three miles below the pass the route crosses the river again and begins the ascent to Wu Chiao Ling divide. For 3 miles on both sides of the pass gradients ranging from 5 to 10 percent will probably be encountered, and a considerable number of cuts and fills will be required in addition to the 900-meter tunnel reportedly under construction.

From Wu Chiao Ling pass, the route descends the narrow gorge of the Ta-kan Ho, in which gradients decrease to about 1 percent as the mouth of the gorge is reached near Ku-lang. As in the upper Chuang-lan Ho valley, construction problems in the gorge will be complicated by its narrowness and the lack of enough space for laying out curvatures with relatively easy gradients.

At Ku-lang the route enters the Wu-wei Basin and continues along the alluvial fans at the base of the Nan Shan. Although grades are generally less than I percent, crossing the many irrigation ditches and streams entering the alluvial fans from the mountains to the west will probably make necessary numerous cuts, fills, and bridges. From Wu-wei to Yung-ch'ang, the route passes through some of the most densely populated parts of the Wu-wei Basin, an area with many small agricultural villages, local roads, irrigation ditches, and mountain streams.

Beyond Yung-ch'ang the route begins the ascent of an outlier of the Nan Shan, which separates the Wu-wei and Etsin Gol Basins.

Grades in the main pass area, about 55 kilometers southeast of Shan-tan, and in the descent into the Shan-tan Valley of the Etsin Gol Basin probably nowhere exceed 2 percent.

After descending into the Shan-tan Valley, the route follows the narrow flood plain of the Kan-chou Ho, a branch of Etsin Gol, to Lin-tse. Although gradients in the valley are generally less than I percent, construction of the rail line is likely to be complicated by the dense settlement along the numerous braided stream channels of the narrow flood plain and by the wide dry washes of the tributary channels, which include braided intermittent streams, gravel and sand outwash, and possibly some dunes areas. Many bridges will probably be needed in dry-wash areas. Northwest of Chang-yeh, the flood plain becomes increasingly constricted by bordering sandy areas, shifting sand dunes, and salt marshes; and the dry washes of the tributary streams are more deeply incised. In addition to seasonal flooding, drifting sand or unstable marsh areas are likely to complicate problems of railroad construction.

Northwest of Lin-tse, the route leaves the Kan-chou Ho flood plain and strikes out across the sand desert and salt marshes to

Chiu-ch'tan. About 25 kilometers east of Chiu-ch'tan, the route enters the alluvial fan on which the oasis of Chiu-ch'tan is located. Here the braided channels of the Pei-ta Ho have cut steep-sided gullies with salt-swamp bottoms. Sand dunes border the gully area on both sides, and small agricultural villages are located on the butte-like high ground between the stream channels.

### 2. Future Construction Rate

As reported in the Communist press and confirmed by other sources, construction between Lan-chou and the Wu Chiao Ling pass has been progressing at a rate of about 1/3 mile per day. Although the rate fulfills the target for 1953 construction, presumably it will be drastically decelerated as engineering problems of the pass area are encountered. Beyond the pass, however, no difficult construction problems should be encountered before reaching Chang-yeh, and the present rate of construction could be maintained or increased. Between Chang-yeh and Chiu-ch'üan construction may again be slowed down. Even if the present construction rate is maintained, however, over 3 years will be required to reach the oilfields at Yü-men, another 5 years to reach Ti-hua, and almost 2 1/2 years more to reach the junction with the Turk-Sib Railroad.

### C. The Szechwan--Kansu Railroad

In Chinese news reports the connecting rail line being built from Ch'eng-tu in Szechwan Province to the Lung Hai Railroad at either T'ien-shui or Pao-chi in Kansu Province is regarded as almost as important as the Northwest Railroad. According to reports the line is in operation as far as Mien-yang in Szechwan Province, 118 kilometers from Ch'eng-tu. The Communists estimate that the entire southern sector from Ch'eng-tu to Lüch-yang in Shensi Province will be completed by the summer of 1954 and that the entire line will be finished by 1955.

### 1. Alignment and Construction Problems

The proposed route of the Szechwan--Kansu line can be roughly divided into five sectors on the basis of terrain characteristics:

(1) the Ch'eng-tu Plain sector from Ch'eng-tu to Lo-chiang, (2) the Mien-yang Hills sector from Lo-chiang to Chiang-yu, (3) the northwestern foothills sector from Chiang-yu to Chao-hua, (4) the Ta-pa Shan sector (lower course of Chia-ling Chiang) from Chao-hua to Lüch-yang, and (5) the Tsinling Shan sector (upper course of Chia-ling Chiang), including the Chia-ling Chiang--Wei Ho divide.

From Ch'eng-tu the line trends northeast to Lo-chiang, crossing the alluvial fans of southeastward-flowing streams in the Ch'eng-tu

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Plain. Although the terrain is fairly level with grades generally under 1 percent, the area is intensively cultivated and a great many river and stream crossings were required.

Near Lo-chiang the line enters an area of complex, maturely dissected hill land centering around Mien-yang in which local relief ranges up to 600 feet, with many short steep slopes. The route from Lo-chiang to Mien-yang follows small tributary stream valleys to reach the valley of the Fou River, and the railroad alignment in this area is likely to be winding, with numerous cuts and fills needed to avoid local short gradients of over 5 percent. Beyond Mien-yang, the present railhead, the proposed route turns north and follows the valley of the Fou River through the remaining area of hill land. Whereas the more direct motor road to Chao-hua and Kuang-yuan continues across the hills to the northeast, the rail route makes a wide detour via Chiang-yu through the foothills of the mountains along the northern border of Szechwan. The flood plain of the Fou River is comparatively level, with grades probably averaging less than I percent, but the river itself will have to be crossed at many points.

At Chiang-yu the route leaves the valley of the Fou River.

Following various headstream tributaries of the Fou River,

Pai-lung Chiang, and Chia-ling Chiang, the route winds its way to Chao-hua through the northeasterly trending foothills of the mountains of northwestern Szechwan. This devious route was evidently followed to take advantage of the easier though longer gradients of the foothill streams and thus avoid the rough, maturely dissected hill land between Mien-yang and Kuang-yūan. Although relative relief in the foothill ranges is up to 2,500 feet, the gradients of the valley floors are generally less than 1 percent except near the two watersheds, where grades may be as much as 10 percent for short distances.

Construction problems are concerned chiefly with the roadbed. The valleys are narrow and winding, and numerous stream crossings, cuts and fills, and probably some tunneling will be required. Major tunneling and grading operations will probably be necessary in the two watershed areas--one 5 kilometers northeast of Chiang-yu and the other 50 kilometers northeast of Chiang-yu.

The route follows the main channel of the Chia-ling Chiang northward through the Ta-pa Shan from Chao-hua in Szechwan to Lüeh-yang in Shensi Province. The Chia-ling Chiang Valley has a very narrow floor with steep sides and is moderately winding. Although gradients of the flood plain generally do not exceed 1 or 2 percent, it will probably be necessary to make numerous cuts,

fills, and river crossings to eliminate sharp curves and difficult or excessive excavation. That local difficulties of construction in the hill lands and mountainous areas are anticipated is indicated by reports that 89 tunnels are planned for the Mien-yang--Lüeh-yang section, 6 of which will be over 2,000 feet long. The longest tunnel is reported to be the 5,250-foot Pa-miao-kou tunnel in Kuang-yüan Hsien.

Beyond Lüch-yang the original proposed route turns northwest up a branch of the Chia-ling Chiang and follows the tributary valley into Kansu Province. Recent news reports have indicated, however, that the line beyond Lüch-yang may be shifted to another tributary of the Chia-ling Chiang. In this case the line would cross the Tsinling Shan at a lower elevation and connect with the Lung Hai line at Pao-chi. Grades along both routes are generally steeper than in the Ta-pa Shan section, and difficulties of construction are likely to be greater because of the narrow, constricted nature of the river channels and would probably involve extensive cut, fill, and tunneling operations. Along both routes the steepest gradients will be encountered near the divide southwest of T'ien-shui or Pao-chi where the routes cross from the Chia-ling Chiang to the Wei Ho watersheds.

### 2. Future Construction Rate

An examination of the terrain through which the proposed route passes suggests that construction schedules will be increasingly slower for successive sections of the line as the problems of line construction become more difficult. The rate of construction from Ch'eng-tu has been somewhat greater than on the Lan-chou--Sinkiang line, averaging between 1/3 and 1/2 mile per day according to Communist press reports. The line is apparently being constructed from the Ch'eng-tu terminus only, possibly because Szechwan is the sole source of construction materials for this line, the North China output of construction materials being earmarked for the Northwest Railroad. Difficulties of construction also vary directly with the distance from Ch'eng-tu, the most serious gradient and tunneling problem occurring along the approaches to the divide before the Wei Ho. This coincidence enables the relatively inexperienced Chinese Communist construction crews to take on successively difficult engineering problems as the construction progresses. The importance of such experience in Chinese railroad construction is indicated by a recent news report from Chungking stating that the initial survey work on the Ch'eng-tu--K'un-ming railroad is being done by personnel who participated in the survey of the Szechwan--Kansu line. It remains to

be seen whether the accretion of railroad-building experience will balance the increasing difficulty of construction as the line progresses into the mountains. Despite Communist claims, the line will probably not reach either T'ien-shui or Pao-chi before the spring of 1956, even if the present rate is maintained.

### D. Feeder Highways

Communist press reports the increasing development of provincial roads to serve as feeders to the railroads. Also used as feeder highways are the present principal motor roads that link Szechwan and Shensi between Ch'eng-tu and Sian, those that extend into the Kansu Corridor and Tsinghai from Sian via Lan-chou, and the main road into Sikang from Ch'eng-tu via Ya-an and K'ang-ting. Secondary roads are being built to connect the railroads with local commercial centers of nomadic areas in southern Kansu, northwestern Szechwan, and the eastern parts of Tsinghai and Sikang. Major emphasis is being placed on the construction of roads from Lan-chou and the other market centers of eastern Kansu to the southern Kansu and eastern Tsinghai nomadic areas and on the repair and extension of regional highways linking the northern and southern trade centers. Many recent news reports have stressed progress of construction and repair

on (1) the Lan-chou--Hsia-ho (Labrang)--Lang-mu-ssu "country road," which provides a market route for the nomadic areas in the Kansu-Szechwan-Tsinghai border area; (2) market roads from Hsi-ning and Lan-chou to the local trading centers of Kuei-te, T'ung-jen, Hsun-hua, and Kung-ho in eastern Tsinghai; and (3) the highway extending south from Lan-chou through the important market centers of Lin-t'ao and Min-hsien to Ch'eng-tu.

A market road reportedly has been extended far into the inaccessible grazing areas of northwestern Szechwan to connect the market centers of Li-hsien, Ma-tang, and A-pa. Communist news reports have publicized widely a plan to provide a route through the grazing areas of northwestern Szechwan by extending and joining the Lan-chou--Lang-mu-ssu and the Ch'eng-tu--A-pa roads.

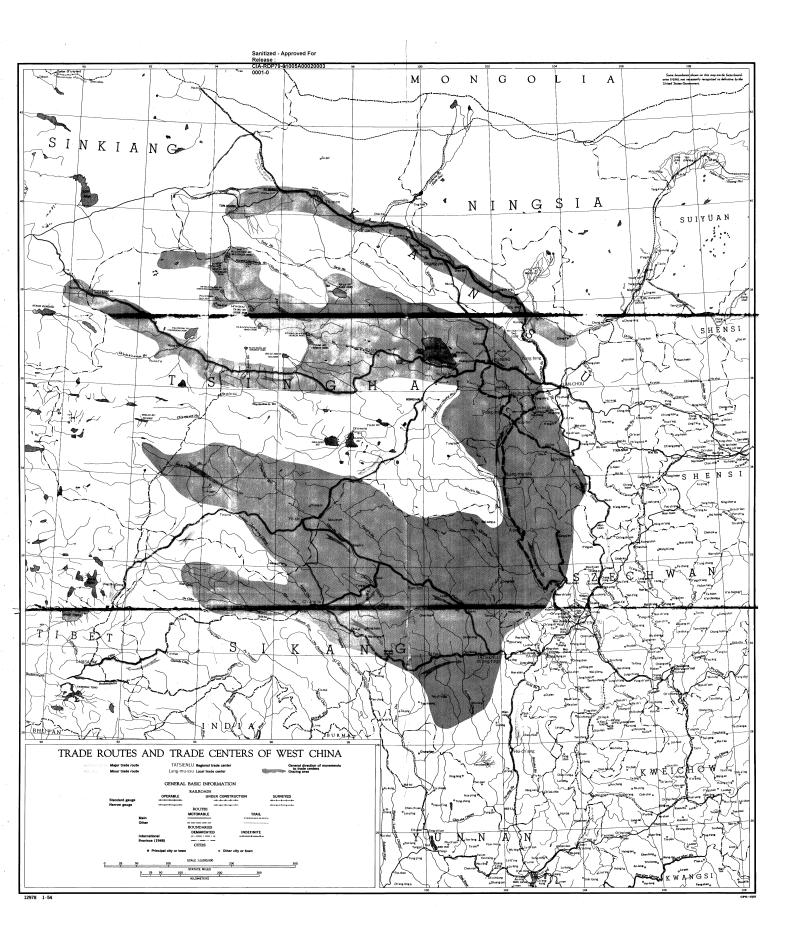
In the south, the Sikang-Yünnan highway has supposedly been improved and opened for commercial traffic, and feeder routes along the highway are reported to be under construction or completed.

The expanding network of feeder roads is evidently designed to relieve the necessity for transporting livestock products along the hazardous Yü-shu--Hsi-ning caravan route and to drain off surplus products toward the newly constructed or proposed rail lines linking market centers of the north and south.

### E. Realignment of Trade Patterns

The immediate results of the new roads and railroads will be a realignment of the trade pattern in nomadic areas of West China and intensified exploitation of wool, hides, and other livestock products in heretofore isolated grazing areas. As the feeder-road network expands and the Lan-chou--Sinkiang railroad extends further into the Kansu Corridor, the exploitation of known reserves of minerals such as oil and salt could be expanded. At present, salt from the Tsaidam Basin is collected at a transshipment point at the junction of the Hsi-ning--Yu-shu and the Tsinghai-Sinkiang roads. Up to now the utilization of petroleum products from Yü-men has been limited by the serious lack of adequate transportation in the Kansu Corridor. The chief bottleneck to truck transportation in the Corridor -- the Wu Chiao Ling pass -- should be crossed by the Lan-chou--Sinkiang railroad within the next year; petroleum products are already being transferred to the railroad at the present railhead, Yung-teng. During the next few years, as rail construction progresses across the easier terrain of the Corridor beyond Wu Chiao Ling, transportation problems of the Yü-men oilfields should decrease considerably.

Although it is unlikely that the two rail lines are being constructed for the sole purpose of increased exploitation of native products, the ultimate role of the lines in a new era of economic development of the northwest may not emerge for some years to come. In the meantime, livestock production in West China will be encouraged, the search for critical minerals will continue, and the lines of communications so necessary for effective control and exploitation of the land and people of West China will be extended. (UNCLASSIFIED)



# ADMINISTRATIVE DIVISIONS OF COMMUNIST CHINA -THE CENTRAL -SOUTH

This article is one of a series of articles on the major administrative areas (ta-hsing-cheng ch'ü) of Communist China. 1/ The accompanying tables present in detail the administrative structure of Central-South China.

The Central-South Administrative Area, established on 5 February 1950, comprises the six provinces of Honan, Hunan, Hupeh, Kiangsi, Kwangsi, and Kwangtung, with a total area of about 1,165,000 square kilometers and a population of approximately 160,000,000. Its administrative center is located in Wu-han municipality, Hupeh Province. 2/ Although some of the six major administrative units of Communist China--notably the Northeast (Manchuria)--possess identifiable regional characteristics, the six provinces of the Central-South have almost no unifying economic, cultural, or linguistic ties. Traditionally, Honan has been con-

<sup>1.</sup> Previous articles appeared in Map Research Bulletin Nos. 10, 16, 17, and Map Intelligence Review Nos. 33 and 35.

<sup>2.</sup> For administrative purposes, the three cities of Han-K'ou (Hankow), Wu-ch'ang, and Han-yang are grouped together to form Wu-han municipality, which is directly administered by the Central-South Administrative Committee with headquarters in Han-k'ou. These three cities, at the junction of the Yangtze and Han Rivers, traditionally have been known as the "Wu-han cities."

sidered part of North China; Hunan, Hupeh, and Kiangsi are economically tied to the Yangtze, with the twin cities of Han-k'ou and Wu-ch'ang representing the commercial foci of the central Yangtze Valley; and the Cantonese-speaking provinces of Kwangsi and Kwangtung are economically oriented toward the Hsi Chiang (West River), with Kuang-chou (Canton) a South China regional capital. Grouping provinces of such widely differing characteristics into a single administrative unit may have been a Communist move designed to undermine the geographic basis for political regionalism. Chinese provinces, particularly in the south and southwest, have tended in the past to operate as semi-independent entities. The alliance of the war lords controlling Kwangsi and Kwangtung, for example, long was an obstacle to national unification during the rule of the Chinese Nationalist Government. The delineation of the Central-South (and possibly other regional administrative units) may, on the other hand, have been determined by the military situation of late 1949, as all the territory of the Central-South was under the military jurisdiction of one Communist field commander.

Originally, Central-South China was governed by a Military-Administrative Committee, which functioned in many respects as a smaller edition of the central government. The far-reaching

administrative readjustments of November 1952, 1/ however, reduced considerably the functions and powers of the regional administrative units, and on 22 January 1953 the Central-South Military-Administrative Committee was replaced by a mere "Administrative Committee."

In addition to the standard administrative units, the Chinese Communists have created numerous so-called autonomous administrative units (tzu-chih ch'ū) in minority-inhabited areas. In Central-South China three autonomous units have been organized at the special district (chuan-ch'ū) administrative level: (1) the West Kwangsi Chuang Autonomous District, consisting of 34 hsien and reportedly having a population of slightly over 6,000,000, some 4,000,000 of whom are stated to be Chuang people; 2/(2) the West Hunan Miao Autonomous District, comprising 10 hsien and a population of some 1,500,000, including some 300,000 Miao tribespeople; and (3) the Hainan Li-Miao Autonomous District of Hainan Island, with a population of about 270,000. Autonomous units of lesser administrative status have been created in areas of Kwangsi

<sup>1.</sup> See Map Intelligence Review No. 36, May 1953, pp. 1-4.

<sup>2.</sup> The Chuang are a Tai-speaking people who culturally resemble the Chinese.

and Kwangtung where fewer minority peoples are concentrated. 1/
The actual autonomy exercised by a so-called autonomous people's
government is slight; each autonomous unit is part of and subordinated to the Chinese administrative system. The Chinese Communists have sought, through intensive political indoctrination, to eradicate the traditional dislike of the Chinese by non-Chinese groups and, under the guise of granting "autonomy," to control more closely and effectively minority-inhabited areas.

The strengthening and tightening of Chinese Communist control since 1951 has prompted a reduction in the number of special districts and their replacement in some provinces by a new type of administrative unit. Theoretically, these changes will promote governmental economy and efficiency of administration. Further modifications may be expected at subprovincial administrative levels.

Between early 1951 and June 1953 the number of special districts in Communist China declined from 201 to 145; in the Central-South a reduction from 58 to 41 (including comparable administrative units) has occurred. In early 1953, five "administrative districts" (hsing-cheng ch'ū) were established to replace special districts--4

<sup>1.</sup> Map CIA 12667, available in the CIA Map Library, locates most of the autonomous administrative units of Communist China.

Information from Chinese Communist sources suggests that special urban administrative units, possibly analogous to the so-called workers' settlements of the Soviet Union, have been established. 1/ A 1951 directive of the Kwangtung Provincial Government provided for the creation of chen (literally, market town) in localities where the population exceeds 2,000 and more than 60 percent of the workers are engaged in nonagricultural activities. 2/ These standards are very similar to criteria used in establishing a workers' settlement in the USSR. According to the 1953 People's Handbook,

25X1A

<sup>1.</sup> A workers' settlement (rabochiy poselok) in the USSR often is created in conjunction with the opening of a new mine or the establishment of a new industry.

of a total of 16 chen in all China, 4 are located in Central-South China, all in Honan. Administratively, the chen are directly governed by the hsien. Recent information (August 1953) contained in a Chinese Communist atlas indicates that the 4 chen in Honan have been changed in status to municipalities governed by a special district. Whether these chen are similar to workers' settlements and whether the criteria cited in the 1951 Kwangtung directive have been used in their establishment has not been ascertained. The Chinese Communist use of the term chen for various types of administrative units is indicated by a New China News Agency report of April 1953, which stated that "six fishermen's areas (or chen)" had been established in coastal areas of Kwangtung "with a view to strengthening the leadership of the fishermen . . . and developing fishery production. " 1/ In this case fishing villages are administered separately from hsien, apparently in order to facilitate closer supervision of the fishing industry and thus increase production. A September 1953 report states that some 56 "fishermen's areas" have been organized in Kwangtung. 2/ 25X1A

2. FBIS, Far East, 10 September 1953, p. AAA-8.

The basic source for Communist administrative data is

Jen-min Shou-ts'e (People's Handbook), published by Ta Kung Pao,

Tientsin, 1 July 1953. Chinese Communist maps, press releases,

and radio broadcasts supplement the handbook. (UNCLASSIFIED)

### CENTRAL-SOUTH ADMINISTRATIVE AREA

Capital: Wu-han

Shih (municipality) under administration of the Administrative Committee: Wu-han and Kuang-chou (Canton)

### HONAN PROVINCE

Capital: K'ai-feng

Chuan Ch'ü 1/	Number of Hsien		icipality) under
(Special District)	(Counties)	Province	Special District
Hsü-ch'ang	16		Chou-k'ou Hsü-ch'ang T'a-ho
Nan-yang	12		Nan-yang
Hsin-yang	17		Chu-ma-tien Hsin-yang
Cheng-chou <u>2</u> /	16	Cheng-chou K'ai-feng	
Shang-ch'iu	15		Shang-ch'iu
Lo-yang	15		Lo-yang
Hsin-hsiang $\frac{3,4}{}$	13	Hsin-hsiang	
An-yang	6	An-yang	
P'ü-yang	7		
Total 9	117	4	8

<sup>1.</sup> The <u>chuan-shu</u> (special office) or administrative center has the same name as the <u>chuan ch'ü</u> in which it is located unless otherwise specified.

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<sup>2.</sup> Administrative center at Jung-yang.

<sup>3.</sup> Administrative center at Chiao-tso.

<sup>4.</sup> Also contains the special mining district (kung-k'uang ch'ü) of Chiao-tso, which is presumably under the jurisdiction of the special district.

### HUNAN PROVINCE

Capital: Ch'ang-sha

Chun Ch'ü (Special District)	Number of Hsien (Counties)		cipality) under becial District
Hsiang-t'an	12	Ch'ang-sha	Chu-chou Hsiang-t'an
Ch'ang-te	14		Ch'ang-te I-yang
Shao-yang 1/	12		Shao-yang
Ch'ien-yang	12		Hung-chiang
Hsing-cheng Ch'ü 2 (Administrative Distr			
South Hunan $\frac{3}{2}$	26	Heng-yang	
Tzu-chi Ch'ü (Autonomous District	<u>)</u>		
West Hunan Miao 4	_/ 10		
	<del></del>		
Total 6	86	2	6

- 1. Also contains the mining district of Hsi-k'uang-shan.
- 2. Administratively comparable to a special district.
- 3. Administrative center at Heng-yang.
- 4. Administratively at special-district level; administrative center at Chi-shou (Suo-li).

#### **HUPEH PROVINCE**

Capital: Wu-ch'ang

Chuan Ch'ü	Number of Hsien	Shih (Municipality) Under
(Special District)	(Counties)	Province Special District
Huang-kang	14	Huang-shih
Hsiao-kan	16	
Chin-chou $\underline{1}/$	13	Sha-shih
I-ch'ang	9	I-ch'ang
Hsiang-yang	15	Hsiang-fan
En-shih	8	
Total 6	75	3 1

<sup>1.</sup> Administrative center at Chiang-ling.

#### KIANGSI PROVINCE

Capital: Nan-ch'ang

g 17	Nan-chiang	
16	Chiang-te-che Shang-jao	n
10		
g <u>2</u> /	Chiu-chiang	
17	Kan-chou	
12	Chi-an	
82	1 5	
	10 g <u>2</u> / 10 17 12	16 Chiang-te-cher Shang-jao  10  g 2/  17 Chiu-chiang  17 Kan-chou  12 Chi-an

<sup>1.</sup> Administrative center at Lin-chüan.

<sup>2.</sup> Also contains the Lu-shan (t'e-pieh ch'ü) or special district. The rendering of t'e-pieh ch'ü as "special district" does not indicate that it is similar in function to a chuan ch'ü.

### KWANGTUNG PROVINCE

Capital: Kuang-chou (Canton)

Hsing-cheng-Ch'ü (Administrative District) 1/	Number of Hsien (Counties)		nicipality) under Special District
		1 TOVINCE ,	
Central Kwangtung 2/	25	Hsin-hui	Fo-shan
			(Kongmoon)
East Kwangtung $3/$	. 21	Shan-t'où	2
		(Swatow)	
West Kwangtung $\underline{4}/$	15	Chan-chian	ng
North Kwangtung 5/	17		Shao-kuan
· · · · · · · · · · · · · · · · · · ·		á	
Hainan <u>6</u> /	18	Hai-k'ou	
Tzu-chi Ch'ü			
(Autonomous District)			
Hainan Li-Miao 7/	5 8/		
	<del></del>		
Total 6	96	4	2
			•

- 1. Administratively comparable to a special district.
- 2. Administrative center at Chiang-men.
- 3. Administrative center at Ch'ao-an.
- 4. Administrative center at Chan-chiang.
- 5. Administrative center at Shao-kuan.
- 6. Administrative center at Hai-k'ou.
- 7. Administrative center at Lo-tung.
- 8. Jointly administered by the Hainan Administrative Office. See footnote 3, page 28.

#### KWANGSI PROVINCE

Capital: Nan-ning

Chuan Ch'ü (Special District)	Number of Hsien (Counties)	Shih (Municipality) under Province
Yung-ning	14	Nan-ning
I-shan	14	Liu-chou
Pai-se	12	
Jung-hsien	10	Wu-chou
Kuei-lin	9	Kuei-lin
P'ing-lo	8	
Ch'in-chou 1/	7	Pei-hai
Tzu-chi Ch'u (Autonomous District)		•
West Kwangsi Chuang	<u>2</u> / 34 <u>3</u> /	
Total 8	74	5

- 1. Administrative center at Ch'in-hsien.
- 2. Administrative center at Nan-ning.
- 3. This autonomous unit consists of <u>hsien</u> from several special districts: all 12 of Pai-se; 12 from Yung-ning; 9 from I-shan; and 1 from Chin-chou. Presumably, joint administration of these 34 <u>hsien</u> is a temporary measure, with eventual sole jurisdiction by the West Kwangsi Chuang Autonomous District.

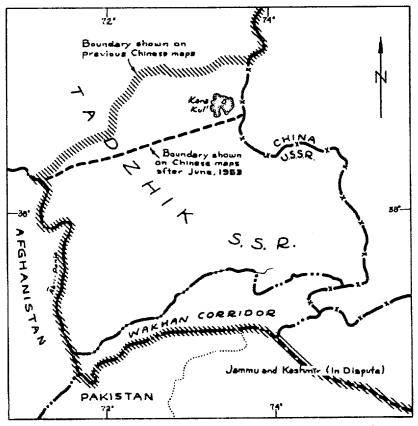
# CHANGES IN THE DELINEATION OF THE CHINA-USSR BOUNDARY IN THE PAMIR AREA

The alteration in the Sino-Soviet boundary in the Pamir area as shown on recently received Chinese Communist maps is the first indication since 1950 of a shift in the cartographic treatment of China's territorial limits. 1/ This change in policy presumably closely reflects official Chinese Communist policy, since the maps are products of the state-operated Ti-t'u Ch'u Pan She (Map Publishing Company), which was formed in late 1952 by the amalgamation of the Ya Kuang and other map-publishing firms.

The China-USSR boundary in the Pamir was never agreed upon by the Chinese, and Chinese governments past and present have vacillated in their portrayal of the frontier on maps. The 1934 edition of the Ting Atlas delineated the boundary as it is commonly shown on United States, Soviet, and most other maps produced outside China. The 1948 edition of the atlas, however, showed a portion of the eastern Tadzhik SSR as belonging to Sinkiang Province. A period of cartographic confusion

<sup>1.</sup> See (1) map of the People's Republic of China, 1:4,200,000, Ti-t'u Ch'u Pan She, July 1953 (CIA Map Library Call No. 84189); and (2) atlas of provincial maps of the People's Republic of China, Ti-t'u Ch'u Pan She, August 1953 (Call No. aH420, .T562).

followed the establishment of the Communist Chinese regime in 1949. 1/ For a time the Soviet version of the boundary was portrayed, but by mid-1950 Chinese maps again included within China



CHINESE TERRITORIAL CLAIMS IN THE PAMIR

a sizable area of the eastern Tadzhik SSR. According to these maps the boundary struck westward, following the southern boundary of Afghanistan to about 36°30'N-71°40'E, and then northward to the

<sup>1.</sup> For a discussion of Chinese cartographic policies, see Map Research Bulletin No. 25, May 1951, pp. 1-8.

Āb-i-Panja, a headwater stream of the Amu Darya. By this neat cartographic trick, the entire Wakhan Corridor was not shown as part of Afghanistan but was "incorporated" into Sinkiang Province.

The boundary continued along the Āb-i-Panja--which marks the Afghanistan-USSR boundary--to roughly 38°15'N-71°17'E. From this point the line cut in a northeasterly direction and joined the conventionally shown China-USSR boundary north of Lake Kara-Kul' at about 39°31'N-73°43'E. By this cartographic device, some 25,000 square miles of the Soviet Union, roughly the territory of the Gorno-Badakhshan Autonomous Oblast, were miraculously added to New China.

The boundary shown on Communist maps published since June 1953 is identical to the one described above, except that it proceeds almost due east from the Āb-i-Panja to the conventional China-USSR boundary south of Lake Kara-Kul' at about 38°55'N-73°40'E. Several thousand square miles of the USSR are thus again shown as Soviet territory. For all of the boundary described, the Chinese cartographers have had the grace to indicate that the boundary is undetermined or indefinite.

The reasons for the cartographic turnabout are obscure.

Undoubtedly, this cartographic expansionism has not gone unnoticed

by the Soviets, and possibly the higher Soviet echelons have been advised as to Chinese cartographic encroachment in the Pamir. Chinese officials, spurred on by higher authorities, may have begrudgingly reallocated a few thousand square miles to soothe their Soviet brethren but intend to retain, at least cartographically, the remainder of their Pamir claim. The change may, on the other hand, reflect a preliminary stage of a gradual withdrawal of Chinese claims in this area so that at some future date Soviet and Chinese cartographers may see eye to eye. (UNCLASSIFIED)

# MERGER OF SUIYÜAN PROVINCE WITH THE INNER MONGOLIA AUTONOMOUS REGION

The recent Peking announcement that Suiyüan Province has been merged with the Inner Mongolia Autonomous Region (IMAR), effective 1 November 1953, came as no great surprise. Actions taken in July and August 1952 had resulted in the transfer of the IMAR capital to Kuei-sui in Suiyttan Province, the merger of the IMAR and Suiyüan military districts, and the appointment of Yün Tse (Ulanfu) as Governor of Suiyuan concurrent with his chairmanship of the IMAR. Separate administration of the two areas was thus largely fictional. According to Peking, the merger was designed "to strengthen nationality and administrative work, and fulfill the economic construction tasks of both areas." The Chinese Communists undoubtedly feel that they have sufficient control over Mongol lands, safeguarded by countless cadres and detachments of the People's Liberation Army, to permit reunion of two areas with Mongol population. Chinese Communist propaganda mills will no doubt use the merger as further evidence of the "benevolent" minority policies of New China.

The inclusion of Suiyuan within the IMAR will add some
170,000 Mongols--earlier (1950-51) organized into the Ikechou and

Ulanchap Autonomous Leagues--thereby increasing the IMAR Mongol population to approximately 1,000,000. 1/ The addition of 2 to 3 million Chinese will bring the IMAR non-Mongol population to about 4,000,000. In an area proclaimed as an "autonomous" Mongol region, the Mongols are actually a distinct minority. Several hundred thousand Mongols, chiefly in Jehol, Liaosi, and Ningsia Provinces, still remain outside the territorial limits of the IMAR. (UNCLASSIFIED)

<sup>1.</sup> Population figures used here have been taken from recent Chinese Communist sources. Chinese population statistics are notoriously unreliable and, regardless of source, are estimates.

#### MAPS AND MAPPING IN CHINA

#### A. Governmental Control of Maps and Mapping

The requirements of the new Chinese Five-Year Plan, initiated in 1953, have given considerable impetus to surveying and cartographic activities in China, which had been more or less dormant since the Communist take-over in 1949. Nothing is known concerning the setup or activities of any Chinese Communist governmental mapping organization comparable to the Nationalist Department of Survey, but recently announced topographic, geologic, and geographic surveying undertaken in conjunction with the inventory of China's natural resources indicates that recent governmental mapping activities may be divided among several major ministries, especially the Ministries of Geology, Water Conservation, Forestry, Agriculture, and Railways, and probably Heavy Industry. "Private mapping" as applied to China is a misnomer, since all such mapping that would be undertaken by the various scientific institutes (see "The Earth Sciences in China", p. 34 ff.) is under the control of the various ministries and the export of scientific periodicals and maps has been strictly banned by the government.

It is believed that the Communists are also slowly extending controls on the export of publications from commercial cartographic

publishing firms in China. According to a notice in the catalog of the Chung-kou Kou Shu Company of Shanghai, all cartographic publishing firms in China have been "amalgamated - - in response to the call to raise the quality of publications and avoid duplication."

The state monopoly formed by the consolidation - - the Ti-T'u

Ch'u Pan She (Map Publishing Co.) - - has its headquarters in Shanghai.

This organization has taken over all the stocks of privately owned map-publishing houses. 1/ Recent catalogs listing new publications of the monopoly also include items from the stocks of defunct companies or reprints of materials originally published by them.

#### B. Recent Maps and Atlases

The most recent publications of the new government publishing monopoly are its Great Map of the Chinese People's Republic,

<sup>1.</sup> Twelve of the cartographic publishing companies are: (1) Great China (Ta Chung Kou) Book Co. (Map Department), Shanghai; (2) Yu Kuang Geographical Society, Shanghai; (3) Continental (Ta Lu) Geographic Society, Shanghai; (4) Popular (Ta Chung) Geographic Society, Shanghai; (5) World Geographic Society (Map Department), Shanghai; (6) Ya Hsin Geographic Society, Wuchang; (7) Oriental (Tung Fang) Geographic Society (Map Department), Shanghai; (8) Kou Kuang Geographic Society, Shanghai; (9) Hwa Hsia Historical and Geographic Society, Shanghai; (10) Hsin Chung Geographic Society, Shanghai; (11) Chen Ch'iu ("Shake the World") Geographic Society, Shanghai; and (12) Renaissance (Fu Hsing) Geographic Society, Peiping. Most of the cartographic publications exported from China in the last few years have been from the first two firms listed.

July 1953 edition; the Provincial Atlas of the Chinese People's Republic, August 1953 edition; and the New China Provincial Atlas.

June 1953 edition. All of the maps are revisions or reprints of maps published by companies that are now defunct. New publications of the government monopoly concerning non-Chinese areas are its recent Chao-hsien Ti-hsing Ta Kua T'u (Physical Map of Korea) and an administrative map of the Mongolian People's Republic.

Prior to their consolidation into the state monopoly, Ya Kuang Geographic Society, Ta Jung Kou Book Company, and other cartographic publishers exported a variety of cartographic materials, ranging from the large map of Greater China (still the standard export map) to a number of individual-province and administrative-district maps at various scales.

### 1. Great Map of the Chinese People's Republic

The recent edition of the Jung Hua Jen Min Kung Ho Ta Ti T'u (Great Map of the Chinese People's Republic), 1:4,200,000, published in July 1953 by the Ti T'u Ch'u Pan She, is probably a revision of the earlier Yu Kuang maps. It is now available for reference at the CIA Map Library. The map shows administrative divisions, hydrography, transportation, and populated places, but it is most useful for determining the alignment of new rail lines

and roads proposed by the Communist regime. In its successive editions, the map can also be used to follow province boundary changes in the recent reshuffling of Chinese provinces. Flood-control projects are indicated, although more detailed information is available in the Provincial Atlas discussed below. Map insets show administrative regions at the time of publication, islands in the South China Sea claimed by the Chinese, and highly generalized hypsography.

### 2. Provincial Atlas of the Chinese People's Republic

Another revision issued by the Ti-t'u Ch'u-pan She is the Chung-hua Jen-min Kung-ho Kou Fen Sheng Ti-t'u (Provincial Atlas of the Chinese People's Republic), 4th edition, August 1953 (CIA Map Library Call No. aH420 .T562, 1953). In addition to 27 maps showing hypsography, hydrography, transportation, and populated places for Greater China, the atlas contains 20 plates of maps at scales varying from 1:250,000 to 1:50,000,000. Half of the plates are devoted to maps of physical geographic conditions (topography, climate, soils, etc.) and maps of agriculture, forestry, and fisheries. The remaining 10 plates include maps of various economic and industrial activities, transportation, population, and administration.

The atlas, in its many successive editions since the Communists assumed power in 1949, is most useful as a published statement of economic activities of the Communists. Especially interesting are the maps showing areas of afforestation and shelter-belt planting, those giving detail of flood-control and water-conservancy schemes, and the inset maps indicating concentrations of industrial and economic activity by type. The province maps can also be used to follow developments in the rail and road network of China.

#### 3. New China Provincial Atlas

The Hsin Chung-kou Fen Sheng T'u (New China Provincial Atlas), June 1953 edition, is of both geographic and economic interest (CIA Map Library Call No. aH420.T563 1953). This small paperbound atlas, evidently designed for intermediate school use, nevertheless contains the only land-use maps of China published by the Chinese Communists since their ascendency to power in 1949. The major part of the atlas consists of maps of the 18 provinces of China Proper plus Taiwan, Manchuria, Inner Mongolia, Sikang, Tsinghai, Tibet, and Sinkiang. Each of these monochrome maps includes hydrography, populated places, roads, railroads, and a hachure rendering of terrain that is almost meaningless. Locations, indicated by Chinese characters, are given for 15 kinds of ore

deposits or workings, 16 types of nonmetallic mineral deposits, and 2 kinds of semiprecious-stone mines. Horse- and sheep-raising areas and fishing grounds are located in the same manner. Even more interesting are the small generalized insets on each map that show the distribution of over 26 types of food and industrial crops. Spot checks of these maps with the distributions shown in Buck's Land Utilization of China indicate that the insets are not mere copies. Furthermore, Buck's map is more restricted, including only the 18 provinces of China Proper. All of the remaining maps in the atlas cover greater China--a polychrome hypsometric map, two climatic maps, a map showing density of population, and the often-published map of the Hwai Ho water-conservancy projects.

The current edition is published by the Ti-t'u Ch'u Pan She, evidently from plates of an earlier edition (October 1952) issued by the Popular (Ta Chung) Geographic Society of Shanghai, one of the publishers absorbed into the government publishing monopoly. The main differences between the two editions are changes in the shapes and boundaries of provinces and a slightly confusing variation possible only in an ideographic language—on the older edition the title is printed from right to left, whereas the recent one reads from left to right. (UNCLASSIFIED)

#### THE EARTH SCIENCES IN CHINA

The development of heavy industry is the main goal of China's first Five-Year Plan. According to the China News Service, China will build a series of new major enterprises, a number of factories for light industries and several thousand kilometers of railway during the next five years. The inventory of China's natural resources is a prerequisite to this development, and continued mobilization of China's scientific personnel, especially in the earth sciences, can be expected as the capital construction gets under way.

Governmental organization of the earth sciences in China began during the 11 years following the inauguration of the Kuomintang Government in 1928. In that year the Nationalists founded the Academia Sinica, which eventually included 14 research institutes. In the fall of 1949 the Chinese Communists formed a new Academy of Sciences and organized it into 17 and later 28 new research institutes. To fulfill its mission to develop the natural sciences for the services of industrial, agricultural, and national defense construction, the Academy is responsible for supervising and organizing scientists and scientific societies, training "scientific cadres," controlling publications and translations, and popularizing Chinese Communist science.

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Among the foremost societies dedicated to the earth sciences are the China Society of Geology, with satellite societies of geophysics, palaeontology, and oceanography and limnology; the China Society of Geography, with its associate, the China Society of Meteorology; and the China Society of Pedology. In fields related to the earth sciences are smaller societies for civil engineering (surveying), forestry, agriculture, animal husbandry, and horticulture. Most of the organizations have branches in the major cities and publish periodicals. The China Society of Geology, for example, has branches in Peking, Nanking, Sian, Chungking, K'un-ming, Canton, and Ch'ang-ch'un and publishes the Journal of Geology. The China Society of Geography, which was formed by the amalgamation of two older societies in 1950, has branches in 14 cities and published the biannual Geography Journal and a monthly educational magazine, Geographical Knowledge. The China Society of Pedology, with nearly 300 members, has branches in 8 major cities and publishes the Journal of Pedology.

Activities of the societies and their member scientists are controlled by the government ministries responsible for the economic development of China. The main ministries are those of Geology,
Heavy Industry, Fuel Industry, Agriculture, Forestry, Water
Conservancy, and Railways.

While scientific activity in China since 1949 has stressed the reorganization of scientific organizations and the reorientation of scientific workers toward their work in the new society, particular emphasis has been given to the development of geology, meteorology, pedology, geophysical survey, industrial chemistry, and metallurgy. Early in 1953, for example, the Communists reported the initiation of a nationwide field survey by 10,000 people of natural resources in the fields of botany, zoology, hydrobiology, water conservation, pedology, and other sciences. Probably as part of this survey, geologists reportedly have been sent to Tibet to scout for minerals, and botanists and soil specialists are said to have investigated the problems of shelter belts, the reclamation of wastelands, and soil and water conservation. A systematic survey of the flora of eastern China, particularly Hopeh Province, has been instituted in an effort to locate plants suitable for the production of rubber and tanning materials. Geologists have been surveying the coal fields of northern and northeastern China, while meteorologists have been investigating the ways and means of improving weather forecasts and analyses.

Geographers are being utilized in a number of ways during the first year of China's Five-Year Plan. In addition to participating in the nationwide survey of natural resources, geographers are reportedly investigating problems of water conservation and of irrigation and flood control of the Hwai Ho and the Yi River. Studies are also being made of shifts in the course of the Huang Ho and the sources of silt. During the past 3 years, according to the New China News Agency in Peking, geographers have collaborated with the Ministry of Railways on projects relating to 4 rail routes in the Southwest District and 3 in the Northwest, and 1 in Inner Mongolia. Studies in economic geography have dealt with the volume of freight for projected rail lines in relation to their impact on the development of these areas. Geographers have also participated in surveys of wasteland in the northeast, reclamation projects in southern China, and forest shelter belts in northern Shensi. Urban geographers have been considering the problem of the relationships of larger cities to their hinterlands, with a view to assisting in the selection of factory and industrial sites and in city planning.

Forestry survey teams also have reportedly been increased in an effort to determine the extent of the timberlands, volume of timber, possible locations for afforestation, and areas for future shelter-

belt planting. The major forest areas surveyed in the past 3 years are in western Manchuria and Chahar, in the Pai-lung Chiang area of southern Kansu, and south of the Yangtze River.

The present emphasis on surveying and the future division of scientific labor are indicated by work allocations for the Ministry of Geology determined at the National Geological Work and Planning Conference in 1953. Of the total strength of the ministry, it is claimed that 60 percent will be used to guarantee the completion of surveying at key points for nonferrous metals, black metals, and coal and to furnish data on mineral deposits as required by the Government to guide the planning of related industries; and that 16 percent will be used for general checkups at key points to discover additional mineral deposits for "key-point meticulous surveys" to be carried out in 1954. An effort will also be made to complete the engineering aspect of the geologic work and to intensify geologic education with a view to training a large number of technical experts. The "key points" for both "general" and "meticulous" surveys appear to be concentrated in the An-shan--Fu-shun--Pen-ch'i area in the districts of Northeast (Manchuria), North, Central-South, and particularly in the heretofore unexplored areas of Northwest and Southwest China. The emphasis on the undeveloped provinces of western China from

Yunnan to Ningsia is in line with the importance of the area suggested by the current development of transportation in West China (see "Transportation and Economic Development in West China," pp. 1-16).

Although the results of the extensive current activity in the various fields of earth science are unlikely to become available outside of China, the continued production of topographic, geologic, geographic, and other earth-science maps and studies increases the probability that the entire cartographic situation in China is changing radically. (UNCLASSIFIED)